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**********06068**********
LEVEL 1 - 1 OF 68 PATENTS

5,670,078

<=2> GET 1st DRAWING SHEET OF 7

Sep. 23, 1997

Magnetic and nonmagnetic particles and fluid, methods of making and methods of using the same

INVENTOR: Ziolo, Ronald F., Webster, New York

DETDESC:
... described in U.S. Pat. No. 4,474,886 to Ziolo. Examples of the precursor ions which may be used includes those derivable from transition metal ions, such as iron, cobalt, nickel, manganese, vanadium, chromium, rare earths and the like. In the case of a non-magnetic colloid, this may include ions of, for example, sulfur, selenium, gold, barium, cadmium, copper, silver, manganese, molybdenum, zirconium, gallium, arsenic, indium, tin, ...

... ions which can be incorporated into the resin beads to form both

single-domain and multidomain magnetic particles include: those derivable from transition metal ions, such as iron, cobalt, nickel, manganese, vanadium, chromium, rare earths and the like. These ions generally exist in the form of chlorides of the metal involved such as ferrous chloride, ferric chloride, copper chloride, nickel chloride, and the like. The corresponding iodides, bromides and fluorides may also be suitable. ...

LEVEL 1 - 2 OF 68 PATENTS

5,663,319

Sep. 2, 1997

Probe compositions for chromosome identification and methods

INVENTOR: Bittner, Michael L., Naperville, Illinois
Morrison, Larry E., DuPage County, Illinois
Legator, Mona S., Chicago, Illinois

SUM:
... capable of reacting, and a fluorophore group may have already reacted, with a linking group. A fluorescent compound may include an organic chelator which binds a luminescent inorganic ion such as a rare earth like terbium, europium, ruthenium, or the like.

The term "linking compound" or "linking group" as used herein generally refers to a hydrocarbonaceous moiety. A linking compound is capable of reacting, and a linking group may have ...

LEVEL 1 - 3 OF 68 PATENTS

5,601,934

<=2> GET 1st DRAWING SHEET OF 1

Feb. 11, 1997

Memory disk sheet stock and method

INVENTOR: Bartges, Charles W., Delmont, Pennsylvania
Baumann, Stephen E., Penn Hills, Pennsylvania
Hyland, Jr., Robert W., Oakmont, Pennsylvania
Jensen, Craig L., Pittsburgh, Pennsylvania
Tarcy, Gary P., Plum, Pennsylvania
Vinnedge, K. Dean, Bettendorf, Iowa
Skeen, Troy C., Bettendorf, Iowa

DETDESC:
... automatically grouped with this same series of elements even though it often performs the same function as scandium, or other "true" rare earths in an alloy composition. It is believed that minor amounts of still other rare earths, like erbium, thulium, lutetium, ytterbium, or another rare earth "act-alike", like hafnium, may be substituted for, or possibly even combined with scandium (or with each other) in varying quantities to achieve the ...

LEVEL 1 - 4 OF 68 PATENTS

5,593,951

<=2> GET 1st DRAWING SHEET OF 4

Jan. 14, 1997

Epitaxy of high T[C]superconductors on silicon

INVENTOR: Himpsel, Franz J., Mt. Kisco, New York

SUM:
... as well as to understand the basic mechanisms for superconductivity in this class of materials.

A2

Bednorz and Mueller first showed superconducting behavior in mixed copper-oxides, typically including rare earth and/or rare earth-like elements and alkaline earth elements, for example La, Ba, Sr, . . . , and having a perovskite-like structure.

Materials including the so called "1-2-3" phase in the Y-Ba-Cu-O ...

DETDESC:
... EMBODIMENTS

A technique is provided for depositing high T[c]superconducting copper-oxide based materials epitaxially on Si (001). Typically, these classes of superconducting materials include a rare earth or rare earth-like element and/or an alkaline earth element. Representative formulas for such materials are the following:

(A[1- chi]B chi)2Cu omicron [4- epsilon]

and

A1B2Cu3O[7- epsilon]

where A is a trivalent element (e.g., ...

... in the art that the present invention applies to epitaxial structures including silicon (001) surfaces and any copper oxide superconductor thereon. Thus, the teaching of this invention can include copper-oxide based compositions having any combinations of rare earth or rare earth-like elements and/or alkaline earth elements as well as copper oxide superconductors which do not contain rare earth elements. Further, it will be apparent to those of skill in the art that the Si (001) surface is ...

LEVEL 1 - 5 OF 68 PATENTS

5,573,574

Nov. 12, 1996

Electrorefined aluminium with a low content of uranium, thorium and rare earths

INVENTOR: Leroy, Michel, St. Egreve, France

SUM:
... applications specifies a minimum Al content of above 99.9995%, (and even sometimes above 99.9997%) and a U + Th content of less than 1 ppb, and even sometimes less than 0.3 or 0.1 ppb.

Rare earths, some of which, like samarium, have a significant alpha radioactivity, are also undesirable. By way of example, 10 ppb of natural samarium emits as many alpha particles as 0.1 ppb of uranium 238. The high purity ...

LEVEL 1 - 6 OF 68 PATENTS

5,569,759

<=2> GET 1st DRAWING SHEET OF 25

Oct. 29, 1996

Water soluble texaphyrin metal complex preparation

INVENTOR: Sessler, Jonathan L., Austin, Texas
Hemmi, Gregory W., Austin, Texas
Mody, Tarak D., Austin, Texas

DETDESC:

... C), 10.24 (s, 2 H, ArH), 12.23 (s, 2 H, CH=N); UV/vis: lambda [max]420.0, 477.5, 730.0; FAB MS M< + > 811.

Other lanthanide and rare earth-like metal complexes may be synthesized including the Gd< + 3> , Lu< + 3> , La< + 3> , In< + 3> , and Dy< + 3 > complexes.

EXAMPLE 4

Synthesis of B2T2 TXP, see FIGS. 7A and ...

LEVEL 1 - 7 OF 68 PATENTS

5,567,564

<=2> GET 1st DRAWING SHEET OF 7

Oct. 22, 1996

Liquid development composition having a colorant comprising a stable dispersion of magnetic particles in an aqueous medium

INVENTOR: Ziolo, Ronald F., Webster, New York

DETDESC:
... described in U.S. Pat. No. 4,474,886 to Ziolo. Examples of the precursor ions which may be used includes those derivable from transition metal ions, such as iron, cobalt, nickel, manganese, vanadium, chromium, rare earths and the like. In the case of a non-magnetic colloid, this may include ions of, for example, sulfur, selenium, gold, barium, cadmium, copper, silver, manganese, molybdenum, zirconium, gallium, arsenic, indium, tin, ...

... ions which can be incorporated into the resin beads to form both single-domain and multidomain magnetic particles include: those derivable from transition metal ions, such as iron, cobalt, nickel, manganese, vanadium, chromium, rare earths and the like. These ions generally exist in the form of chlorides of the metal involved such as ferrous chloride, ferric chloride, copper chloride, nickel chloride, and the like. The corresponding iodides, bromides and fluorides may also be suitable. ...

LEVEL 1 - 8 OF 68 PATENTS

5,554,428

Sep. 10, 1996

Memory disk sheet stock and method

INVENTOR: Bartges, Charles W., Delmont, Pennsylvania
Hayland, Jr., Robert W., Oakmont, Pennsylvania
Jensen, Craig J., Pittsburgh, Pennsylvania
Baumann, Steven F., Penn Hills, Pennsylvania (Rule 47 Application)

SUM:
... automatically grouped with this same series of elements even though it often performs the same function as scandium, or other "true" rare earths in an alloy composition. It is believed that minor amounts of still other rare earths, like erbium, thulium, lutetium, ytterbium, or another rare earth "act-alike", like hafnium, may be substituted for, or possibly even combined with scandium (or with each other) in varying quantities to achieve the ...

LEVEL 1 - 9 OF 68 PATENTS

5,504,205

<=2> GET 1st DRAWING SHEET OF 25

Apr. 2, 1996

Reduced sp<3 > texaphyrins

INVENTOR: Sessler, Jonathan L., Austin, Texas
Hemmi, Gregory W., Austin, Texas
Mody, Tarak D., Austin, Texas

DETDESC:
... 2H, CH=C), 10.24 (s, 2H, ArH), 12.23 (s, 2H, CH=N); UV/vis: lambda max 420.0, 477.5, 730.0; FAB MS M< + > 811.

Other lanthanide and rare earth-like metal complexes may be synthesized including the Gd< + 3> , Lu< + 3> , La< + 3> , In< + 3 > and Dy< + 3 > complexes.
EXAMPLE 4

Synthesis of B2T2 TXP, see FIG. 7.

...

LEVEL 1 - 10 OF 68 PATENTS

5,491,224

Feb. 13, 1996

Direct label transaminated DNA probe compositions for chromosome identification and methods for their manufacture

INVENTOR: Bittner, Michael L., 1768 Brookdale Rd., Naperville, Illinois 60563
Morrison, Larry E., 21 W. 559 Kensington Rd., Glen Ellyn, Illinois 60137
Legator, Mona S., 6540 N. Francisco, Chicago, Illinois 60645

DETDESC:
... capable of reacting, and a fluorophore group may have already reacted, with a linking group. A fluorescent compound may include an organic chelator which binds a luminescent inorganic ion such as a rare earth like terbium, europium, ruthenium, or the like.

The term "linking compound" or "linking group" as used herein generally refers to a hydrocarbonaceous moiety. A linking compound is capable of reacting, and a linking group may have ...

LEVEL 1 - 11 OF 68 PATENTS

5,475,104

<=2> GET 1st DRAWING SHEET OF 26

Dec. 12, 1995

Water soluble texaphyrin metal complexes for enhancing relaxivity

INVENTOR: Sessler, Jonathan L., Austin, Texas
Hemmi, Gregory W., Austin, Texas
Mody, Tarak D., Austin, Texas

DETDESC:
... 2H, CH=C), 10.24 (s, 2H, ArH), 12.23 (s, 2H, CH=N); UV/vis lambda max 420.0, 477.5, 730.0; FAB MS M< + > 811.

Other lanthanide and rare earth-like metal complexes may be synthesized including the Gd< + 3> , Lu< + 3> , La< + 3> , In< + 3 > and Dy< + 3 > complexes.
EXAMPLE 4
Synthesis of B2T2 TXP, see FIGS. 7A and ...

LEVEL 1 - 12 OF 68 PATENTS

5,457,183

<=2> GET 1st DRAWING SHEET OF 51

Oct. 10, 1995

Hydroxylated texaphyrins

INVENTOR: Sessler, Jonathan L., Austin, Texas
Mody, Tarak D., Sunnyvale, California
Hemmi, Gregory W., Sunnyvale, California
Kral, Vladimir, Na Kozaaoa, Czechoslovakia

DETDESC:
... 2H, CH=C), 10.24 (s, 2H, ArH), 12.23 (s, 2H, CH=N); UV/vis: lambda max 420.0, 477.5, 730.0; FAB MS M< + > 811.

Other lanthanide and rare earth-like metal complexes may be synthesized in a similar manner including the La< + 3> , Nd< + 3> , Sm< + 3> , Eu< + 3> , Gd< + 3> , Dy< + 3 > and Tm< + 3 > complexes.
...

PAGE

LEVEL 1 - 13 OF 68 PATENTS

5,451,576

<=2> GET 1st DRAWING SHEET OF 26

Sep. 19, 1995

Tumor imaging and treatment by water soluble texaphyrin metal complexes

INVENTOR: Sessler, Jonathan L., Austin, Texas
Hemmi, Gregory W., Austin, Texas
Mody, Tarak D., Austin, Texas

DETDESC:
... 2H, CH=C), 10.24 (s, 2H, ArH), 12.23 (s, 2H, CH=N); UV/vis: lambda max 420.0, 477.5, 730.0; FAB MS M< + > 811.

Other lanthanide and rare earth-like metal complexes may be synthesized including the Gd< + 3> , Lu< + 3> , La< + 3> , In< + 3> and Dy< + 3 > complexes.
EXAMPLE 4

Synthesis of B2T2 TXP, see FIGS. 7A and ...

LEVEL 1 - 14 OF 68 PATENTS

5,447,906

Sep. 5, 1995

Thin film high TC oxide superconductors and vapor deposition methods for making the same

INVENTOR: Chaudhari, Praveen, Briarcliff Manor, New York
Gambino, Richard J., Yorktown Heights, New York
Koch, Roger H., Amawalk, New York
Lacey, James A., Mahopac, New York
Laibowitz, Robert B., Peekskill, New York
Viggiano, Joseph M., Wappingers Falls, New York

ABST:
... films are produced by vapor deposition processes using pure metal sources for the metals in the superconducting compositions, where the metals include multi-valent nonmagnetic transition metals, rare earth elements and/or rare earth-like elements and alkaline earth elements. The substrate is exposed to oxygen during vapor deposition, and, after formation of the film, there is at least one annealing step in an oxygen ambient and slow cooling over several

hours to room temperature. The substrates chosen are not critical as long as they are not adversely reactive with the superconducting oxide film. Transition metals include Cu, Ni, Ti and V, while the rare earth-like elements include Y, Sc and La. The alkaline earth elements include Ca, Ba and Sr.

SUM:

... material in the last decade, wherein the critical transition temperature T c at which the material becomes superconducting was increased substantially.

Bednorz and Mueller described copper oxide material including a rare earth element, or rare earth-like element, where the rare earth element could be substituted for by an alkaline earth element such as Ca, Ba or Sr.

The work of Bednorz and Mueller has led to intensive investigation in many laboratories in ...

... 40o K. and methods for making these films, where the films exhibit perovskite-like structure.

It is another object of this invention to provide transition metal oxide superconductive films including a rare earth element, or rare earth-like element, where the films exhibit superconductivity at temperatures greater than 40o K., and methods for making these films.

It is another object of the present invention to provide films having the nominal composition ABO 3 - y or ABO y ...

... provide superconductive oxide films having the nominal composition AB2 Cu3O 9 - y , and methods for making these films, where the films are superconducting at temperatures in excess of 40o K. and A is a rare earth or rare earth-like element, B is an alkaline earth element, and y is sufficient to satisfy valence demands of the composition.

Pat. No. 5447906, *

It is another object of the present invention to provide smooth, continuous copper oxide superconducting films having a perovskite-like ...

... films being smooth and continuous and exhibiting substantial compositional uniformity. In particular, the films are comprised of transition metal oxides containing a superconducting phase, and typically include a rare earth element or rare earth-like element. These rare earth-like elements include Y, Sc and La. Additionally, the rare earth or rare earth-like elements can be substituted for by an alkaline earth element selected from the group consisting of Ca, Ba, and Sr. The transition metals are multi-valent, non-magnetic elements selected from the group consisting of ...

DETDESC:

... especially a T c in excess of liquid nitrogen temperatures. These films are characterized by the presence of a transition metal oxide and typically by the presence of a rare earth element and/or a rare earth-like element which can be substituted for by an alkaline earth. The transition metal element is a multi-relent nonmagnetic element while the alkaline earth element is selected from the group consisting of Ca, Ba, and Sr. The rare earth-like elements include Y, Sc, and La. The nonmagnetic transition metal is selected from the group consisting of Cu, Ni, Ti, and V. Of these, Cu is the most favorable, yielding film properties which are unique and unexpected.

In the further ...

LEVEL 1 - 15 OF 68 PATENTS

5,439,570

<=2> GET 1st DRAWING SHEET OF 26

Aug. 8, 1995

Water soluble texaphyrin metal complexes for singlet oxygen

A.17

production

INVENTOR: Sessler, Jonathan L., Austin, Texas
Hemmi, Gregory W., Austin, Texas
Mody, Tarak D., Austin, Texas

DETDESC:
... 2H, CH=C), 10.24 (s, 2H, ArH), 12.23 (s, 2H, CH=N); UV/vis: lambda max 420.0, 477.5, 730.0; FAB MS M< + > 811.

Other lanthanide and rare earth-like metal complexes may be synthesized including the Gd< + 3> , Lu< + 3> , La< + 3> , In< + 3 > and Dy< + 3 > complexes.
EXAMPLE 4

Synthesis of B2T2 TXP, see FIGS. 7A and ...

LEVEL 1 - 16 OF 68 PATENTS

5,432,171

<=2> GET 1st DRAWING SHEET OF 26

Jul. 11, 1995

Water soluble texaphyrin metal complexes for viral deactivation

INVENTOR: Sessler, Jonathan L., Austin, Texas
Hemmi, Gregory W., Austin, Texas
Mody, Tarak D., Austin, Texas

DETDESC:
... 2H, CH=C), 10.24 (s, 2H, ArH), 12.23 (s, 2H, CH=N); UV/vis: lambda max 420.0, 477.5, 730.0; FAB MS M< + > 811.

Other lanthanide and rare earth-like metal complexes may be synthesized including the Gd< + 3> , Lu< + 3> , La< + 3> , In< + 3 > and Dy< + 3 > complexes.
EXAMPLE 4

Synthesis of B2T2 TXP, see FIGS. 7A and ...

LEVEL 1 - 17 OF 68 PATENTS

5,362,582

Nov. 8, 1994

Battery separator

INVENTOR: Chang, Victor S., Ellicott City, Maryland
Hartwig, Richard C., Laurel, Maryland
Lundquist, Joseph T., Gilroy, California
Parham, Marc E., Bedford, Massachusetts
Kung, James K., Lexington, Massachusetts
Avtges, James A., Belmont, Massachusetts
Laccetti, Anthony J., North Andover, Massachusetts

SUM:
... say the particulate filler must be inert with respect to such end use battery environment. Therefore, alkali insoluble particulate such as zirconia and titanium dioxide (preferred), oxides, hydroxides and carbonates of calcium, magnesium, iron, rare earth and the like should be used only in sheet products which ultimately are formed into battery separators for alkaline batteries. Similarly, acid insoluble particulates such as silica (a precipitated silica is preferred), and the like should be ...

LEVEL 1 - 18 OF 68 PATENTS

5,358,659

<=2> GET 1st DRAWING SHEET OF 5

Oct. 25, 1994

Magnetic materials with single-domain and multidomain crystallites and a method of preparation

INVENTOR: Ziolo, Ronald F., Webster, New York

DETDESC:
... Ions which can be incorporated into the resin beads to form both single-domain and multidomain magnetic particles include: those derivable from transition metal ions, such as iron, cobalt, nickel, manganese, vanadium, chromium, rare earths and the like. These ions generally exist in the form of chlorides of the metal involved such as ferrous chloride, ferric chloride, copper chloride, nickel chloride, and the like. The corresponding iodides, bromides and fluorides may also be suitable. ...

LEVEL 1 - 19 OF 68 PATENTS

5,322,756

<=2> GET 1st DRAWING SHEET OF 3

Jun. 21, 1994

Magnetic fluids and method of preparation

INVENTOR: Ziolo, Ronald F., Webster, New York

DETDESC:
... several different ions including ferrous or ferric ions. Examples of the precursor ions which may be used includes those derivable from transition metal ions, such as iron, cobalt, nickel, manganese, vanadium, chromium, rare earths and the like. These ions generally exist in the form of chlorides of the metal involved, such as ferrous chloride, ferric chloride, copper chloride, nickel chloride, and the like. The corresponding iodides, bromides and fluorides may also be suitable. ...

LEVEL 1 - 20 OF 68 PATENTS

5,304,966

<=2> GET 1st DRAWING SHEET OF 4

Apr. 19, 1994

Method of adjusting a frequency response in a three-conductor type filter device

INVENTOR: Hino, Seigo, Nagoya, Japan
Ito, Kenji, Nagoya, Japan

SUM:
... each other. Each of the dielectric substrates 1 and 2 may be of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The lower dielectric substrate 1 is provided with an external ground conducting layer 3 on the peripheral portion and bottom surface thereof. Similarly, the upper dielectric substrate 2 is provided with an external ground conducting layer 4 on the ...

DETDESC:
... assembling of the filter. Each of the dielectric substrates 21 and 22 may be of dielectric ceramic material having a high dielectric constant and a lower

dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The lower dielectric substrate 21 is provided with an external ground conductor layer 23 on the peripheral portion and outer surface thereof. Similarly, the upper dielectric substrate 22 is provided with an external ground conductor layer 24 on the ...

LEVEL 1 - 21 OF 68 PATENTS

5,296,458

<=2> GET 1st DRAWING SHEET OF 4

Mar. 22, 1994

Epitaxy of high T c superconducting films on (001) silicon surface

INVENTOR: Himpsel, Franz J., Mt. Kisco, New York

SUM:
... as well as to understand the basic mechanisms for superconductivity in this class of materials.

Bednorz and Mueller first showed superconducting behavior in mixed copper-oxides, typically including rare earth and/or rare earth-like elements and alkaline earth elements, for example La, Ba, Sr, . . . , and having a perovskite-like structure. Materials including the so called "1-2-3" phase in the Y-Ba-Cu-O ...

DETDESC:
... EMBODIMENTS

A technique is provided for depositing high T c superconducting copper-oxide based materials epitaxially on Si (001). Typically, these classes of superconducting materials include a rare earth or rare earth-like element and/or an alkaline earth element. Representative formulas for such materials are the following:

(A 1 - x B x)2CuO4 - epsilon and A1B2Cu3O 7 - epsilon

where A is a trivalent element (e.g., La, Y, and ...

... in the art that the present invention applies to epitaxial structures including silicon (001) surfaces and any copper oxide superconductor thereon. Thus, the teaching of this invention can include copper-oxide based compositions having any combinations of rare earth or rare earth-like elements and/or alkaline earth elements as well as copper oxide superconductors which do not contain rare earth elements. Further, it will be apparent to those of skill in the art that the Si (001) surface is ...

LEVEL 1 - 22 OF 68 PATENTS

5,291,162

<=2> GET 1st DRAWING SHEET OF 7

Mar. 1, 1994

Method of adjusting frequency response in a microwave strip-line filter device

INVENTOR: Ito, Kenji, Nagoya, Japan
Shimizu, Hiroyuki, Nagoya, Japan
Oguchi, Hotaka, Nagoya, Japan

SUM:
... type which comprises a pair of dielectric substrates 1a and 1b made of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2 or BaO-TiO2-rare earth or the like, the

dielectric substrates 1a and 1b being stacked to each other. The dielectric substrates 1a and 1b are provided with external ground conducting layers 2a and 2b on the peripheral portion and bottom surface thereof, respectively. On the upper ...

DETDESC:
... assembling of the filter. Each of the dielectric substrates 11 and 12 may be of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The lower dielectric substrate 11 is provided with an external ground conducting layer 13 on the peripheral portion and outer surface thereof. Similarly, the upper dielectric substrate 12 is provided with an external ground conducting layer 14 on the ...

... a pair of piezoelectric substrates 11 and 12 each of which may be of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The dielectric substrates 11 and 12 are provided with external ground conducting layers 13 and 14 on the peripheral portions and outer surfaces thereof, respectively. These ground conducting layers 13 and 14 may be formed by ...

LEVEL 1 - 23 OF 68 PATENTS

5,278,140

<=2> GET 1st DRAWING SHEET OF 5

Jan. 11, 1994

Method for forming grain boundary junction devices using high T c superconductors

INVENTOR: Chaudhari, Praveen, Briarcliff Manor, New York
Chi, Cheng-Chung J., Yorktown Heights, New York
Dimos, Duane B., Montclair, New Jersey
Mannhart, Jochen D., Metzingen, New York, Federal Republic of Germany
Tsuei, Chang C., Chappaqua, New York

SUM:
... as well as to understand the basic mechanisms for superconductivity in this class of materials.

Bednorz and Mueller first showed superconducting behavior in mixed copper-oxides, typically including rare earth and/or rare earth-like elements and alkaline earth elements, for example La, Ba, Sr, . . . , and having a perovskite-like structure. Materials including the so called "1-2-3" phase in the Y-Ba-Cu-O ...

... excess of about 30o K are generally known as "high T c superconductors", and will be referred to in that manner throughout the specification. This designation is meant to include both the materials having rare earth or rare earth-like elements in their crystalline structure, as well as the more recently reported materials which do not contain rare earth or rare earth-like elements. Generally, all these materials are copper oxide based superconductors having Cu-O planes that appear to be primarily responsible for carrying the supercurrents, where the copper oxide planes are separate or in groups separated by the ...

LEVEL 1 - 24 OF 68 PATENTS

5,252,720

<=2> GET 1st DRAWING SHEET OF 25

Oct. 12, 1993

Metal complexes of water soluble texaphyrins

INVENTOR: Sessler, Jonathan L., Austin, Texas

D11

Hemmi, Gregory W., Austin, Texas
Mody, Tarak D., Austin, Texas

DETDESC:
... 2H, CH=C), 10.24 (s, 2H, ArH), 12.23 (s, 2H, CH=N) ; UV/vis: lambda max 420.0, 477.5, 730. 0; FAB MS M< + > 811.

Other lanthanide and rare earth-like metal complexes may be synthesized including the Gd< + 3> , Lu< + 3> , La< + 3> , In< + 3 > and Dy< + 3 > complexes.
EXAMPLE 4
Synthesis of B2T2 TXP, see FIG. 7

...

LEVEL 1 - 25 OF 68 PATENTS

5,235,298

<=2> GET 1st DRAWING SHEET OF 2

Aug. 10, 1993

Temperature compensated stripline filter for microwaves

INVENTOR: Banno, Hisao, Nagoya, Japan
Nishiki, Masahiro, Nagoya, Japan

SUM:
... 4,785,271 and Japanese Patent Prepublication No. 62-263702.

With the microwave stripline filter of the abovementioned type, generally, each dielectric ceramic substrate is made of ceramic material such as BaO-TiO2, BaO-TiO2-rare earth or the like.

However, there is disadvantage that the commonly used ceramic material has a resonant frequency which is decreased as the temperature is risen because the temperature coefficient of the resonant frequency is of a negative characteristic.

It is therefore an object of the present invention to provide a stripline ...

LEVEL 1 - 26 OF 68 PATENTS

5,188,809

<=2> GET 1st DRAWING SHEET OF 4

Feb. 23, 1993

Method for separating coke from a feed mixture containing zirconium and radioactive materials by flotation process

INVENTOR: Crocker, William A., Salem, Oregon
Haygarth, John C., Corvallis, Oregon
Riesen, Jon A., Albany, Oregon
Peterson, John R., Salem, Oregon

DETDESC:
... radium removal.

b) Sodium sulfate or any other source of soluble sulfate is then added in excess of the concentration of the barium plus radium ion equivalents and any other cations which might combine with the sulfate ions, i.e. calcium, rare earths, or the like. If the solution is cold, it should be heated and a digestion allowed to take place which can range from a fairly short time up to hours or days. The preferred digestion period would be a few hours with ...

LEVEL 1 - 27 OF 68 PATENTS

5,162,298

<=2> GET 1st DRAWING SHEET OF 5

Nov. 10, 1992

Grain boundary junction devices using high T c superconductors

INVENTOR: Chaudhari, Praveen, Briarcliff Manor, New York
Chi, Cheng-Chung J., Yorktown Heights, New York
Dimos, Duane B., Upper Montclair, New Jersey
Mannhart, Jochen D., Metzingen, New York, Federal Republic of Germany
Tsuei, Chang C., Chappaqua, New York

SUM:
... as well as to understand the basic mechanisms for superconductivity in this class of materials.

Bednorz and Mueller first showed superconducting behavior in mixed copper-oxides, typically including rare earth and/or rare earth-like elements and alkaline earth elements, for example La, Ba, Sr, . . . , and having a perovskite-like structure. Materials including the so called "1-2-3" phase in the Y-Ba-Cu-O ...

... excess of about 30o K. are generally known as "high T c superconductors", and will be referred to in that manner throughout the specification. This designation is meant to include both the materials having rare earth or rare earth-like elements in their crystalline structure, as well as the more recently reported materials which do not contain rare earth or rare earth-like elements. Generally, all these materials are copper oxide based superconductors having Cu-O planes that appear to be primarily responsible for carrying the supercurrents, where the copper oxide planes are separate or in groups separated by the ...

... [*4] copper oxide material having a superconducting onset temperature greater than 77 K.

[*5] 5. The device of claim 4, where said superconducting material includes an atom selected from the group consisting of rare earth atoms and rare earth-like atoms.

[*6] 6. The device of claim 4, where said superconducting material includes an alkaline earth atoms.

[*7] 7. The device of claim 4, where said superconducting material includes bismuth.

[*8] 8. The device of claim 1, where ...

LEVEL 1 - 28 OF 68 PATENTS

5,160,482

<=2> GET 1st DRAWING SHEET OF 8

Nov. 3, 1992

Zirconium-hafnium separation and purification process

INVENTOR: Ash, Kenneth C., Corvallis, Oregon
Crocker, William A., Salem, Oregon
Haygarth, John C., Corvallis, Oregon
Lee, David R., Lebanon, Oregon
Morris, Donald, Corvallis, Oregon
Peterson, John R., Salem, Oregon
Riesen, Jon A., Albany, Oregon
Yih, Robert S., Salem, Oregon

DETDESC:
... system or solution.

b) Sodium sulfate or any other source of soluble sulfate is then added in excess of the concentration of the barium plus radium ion equivalents and any other cations which might combine with the sulfate ions, i.e. calcium, rare earths, or the like. If the solution is cold, it should be heated and a digestion allowed to take place which can range from a fairly short time up to hours or days. The preferred digestion period would be a few hours with ...

LEVEL 1 - 29 OF 68 PATENTS

5,112,795

May 12, 1992

Supported silver catalyst, and processes for making and using same

INVENTOR: Minahan, David M., Cross Lanes, West Virginia
Thorsteinson, Erlind M., Charleston, West Virginia
Liu, Albert C., Charleston, West Virginia

SUM:
... metal promoter employed is not critical and may include the one or more alkali metals; one or more alkaline earth metals; or one or more other promoters, such as thallium, gold, tin, antimony, rare earths and the like. The catalysts produced are said to be equally as efficient as catalysts produced by coincidental methods of preparation.

Supported, silver-containing, alkylene oxide catalysts often include one or more metal- ...

LEVEL 1 - 30 OF 68 PATENTS

5,084,684

<=2> GET 1st DRAWING SHEET OF 5

Jan. 28, 1992

Method of adjusting a frequency response in a three-conductor type filter device

INVENTOR: Shimizu, Hiroyuki, Nagoya, Japan
Ito, Kenji, Nagoya, Japan
Wakita, Naomasa, Nagoya, Japan

SUM:
... each other. Each of the dielectric substrates 1 and 2 may be of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The lower dielectric substrate 1 is provided with an external ground conducting layer 3 on the peripheral portion and bottom surface thereof. Similarly, the upper dielectric substrate 2 is provided with an external ground conducting layer 4 on the ...

DETDESC:
... assembling of the filter. Each of the dielectric substrates 11 and 12 may be of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The lower dielectric substrate 11 is provided with a ground conducting layer 13 on the lower or outer surface thereof. Similarly, the upper dielectric substrate 12 is provided with a ground conducting layer 14 on the upper or ...

LEVEL 1 - 31 OF 68 PATENTS

5,084,312

<=2> GET 1st DRAWING SHEET OF 2

Jan. 28, 1992

Molten metal containment vessel with rare earth oxysulfide protective coating thereon and method of making same

INVENTOR: Krikorian, Oscar H., Danville, California
Curtis, Paul G., Tracy, California

SUM:
... same. More particularly, this invention relates to an improved containment vessel for molten metals formed by coating at least the inside surface of a containment vessel with an oxysulfide or sulfide of a rare earth or rare earth-like element.

Molten metals such as uranium, plutonium, aluminum, and calcium are usually contained in vessels or crucibles made from graphite or a refractory metal such as, for example, niobium, tantalum, molybdenum, or tungsten. ...

... in which wetting of the vessel's surfaces by molten metal is inhibited by coating the surfaces of at least the inner walls of the containment vessel with one or more compounds comprising an oxysulfide of a rare earth or a rare earth-like element to inhibit such wetting and or adherence by the molten metal.

It is a further object of this invention to provide a method for making an improved molten metal containment vessel in which wetting of the surfaces by ...

DETDESC:
... rare earth oxysulfide or sulfide compound include the lanthanide elements La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu; as well as the rare earth-like elements Sc and Y; and actinides such as Th and U. The term "rare earth" and "rare earth elements", as used herein, are therefore intended to define any of the above listed elements.

The rare earth oxysulfide and sulfide coatings of the ...

LEVEL 1 - 32 OF 68 PATENTS

5,075,653

Dec. 24, 1991

Method of adjusting a frequency response in a three-conductor type filter device

INVENTOR: Ito, Kenji, Nagoya, Japan
Shimizu, Hiroyuki, Nagoya, Japan

SUM:
... each other. Each of the dielectric substrates 1 and 2 may be of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The lower dielectric substrate 1 is provided with an external ground conducting layer 3 on the peripheral portion and bottom surface thereof. Similarly, the upper dielectric substrate 2 is provided with an external ground conducting layer 4 on the ...

DETDESC:
... assembling of the filter. Each of the dielectric substrates 11 and 12 may be of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The lower dielectric substrate 11 is provided with an external ground conducting layer 13 on the peripheral portion and outer surface thereof. Similarly, the upper dielectric substrate 12 is provided with an external ground conducting layer 14 on the ...

LEVEL 1 - 33 OF 68 PATENTS

5,066,934

<=2> GET 1st DRAWING SHEET OF 6

Nov. 19, 1991

Method of adjusting a frequency response in a stripline filter device

INVENTOR: Ito, Kenji, Nagoya, Japan
Shimizu, Hiroyuki, Nagoya, Japan
Wakita, Naomasa, Nagoya, Japan

SUM:
... each other. Each of the dielectric substrates 1 and 2 may be of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The lower dielectric substrate I is provided with an external ground conducting layer 3 on the peripheral portion and bottom surface thereof. Similarly, the upper dielectric substrate 2 is provided with an external ground conducting layer 4 on the ...

DETDESC:
... assembling of the filter. Each of the dielectric substrates 11 and 12 may be of dielectric ceramic material having a high dielectric constant and a lower dielectric loss such as BaO-TiO2, BaO-TiO2-rare earth or the like. The lower dielectric substrate 11 is provided with an external ground conducting layer 13 on the peripheral portion and outer surface thereof. Similarly, the upper dielectric substrate 12 is provided with an external ground conducting layer 14 on the ...

LEVEL 1 - 34 OF 68 PATENTS

5,045,289

<=2> GET 1st DRAWING SHEET OF 4

Sep. 3, 1991

Formation of rare earth carbonates using supercritical carbon dioxide

INVENTOR: Fernando, Quintus, Tucson, Arizona
Yanagihara, Naohisa, Zacopan, New Mexico, Mexico
Dyke, James T., Santa Fe, New Mexico
Vemulapalli, Krishna, Tuscon, Arizona

SUM:
... invention. This technique finds use in facilitating the extraction of these materials from rare earth containing mineral ores by providing a scheme for separating these particular rare earths from other rare earth and rare earth-like materials which do not react to form carbonates.

2. Description of the Prior Art

The rare earths, also known as the lanthanides or as lanthanons, and meaning here those elements having atomic numbers 57 to 71, are substances finding utility ...

DETDESC:
... synthesis of rare earth carbonates from certain select rare earths in the trivalent (+ 3) state as normally found in, for example, rare earth oxides or hydroxides, from other rare earths or rare earth-like materials. Rare earth-like materials are those compounds associated with, normally present in, or formed during the processing of, the various source ores from which the lanthanides are derived. These materials, while not true rare earths are analogous to the lanthanides in structure and behavior and are therefore of concern during processing and separation. Included among these rare earth-like

materials are compounds formed from the actinides, (elements of atomic numbers 89 to 103, such as thorium), titanium, yttrium, and zirconium. In general, these elements, which form the rare earth-like compounds, are present in their + 4 oxidation state; examples include ThO2 and ZrO2. The process of the invention has utility in the quantitative precipitation of the particular reactive lanthanides in the + 3 oxidation state and in the separation of these ...

... about 40o C. High yields of 95% or better are obtained in approximately one hour. These particular rare earth oxides or hydroxides can thus be readily separated from the oxides or hydroxides of rare earth or rare earth-like elements such as praseodymium (Pr), terbium (Tb), erbium (Er), ytterbium (Yb), zirconium (Zr), cerium (Ce), and thorium (Th) because these latter rare earth and rare earth-like oxides (or hydroxides) do not form carbonates under the above conditions despite the fact that some are in the trivalent state. It is believed that the oxides of these elements are particularly complex and as such do not readily react under the conditions of the invention.

This ...

Pat. No. 5045289, *

... through appropriate valves and the reaction solution is then filtered. The solids which remain are then washed with deionized water and dried in air. These solids comprise both the rare earth materials which have reacted to form carbonates and also those rare earth and/or rare earth-like materials which did not react, or did not react significantly, and have thus remained in their oxide or hydroxide form.

The solid precipitate obtained above is next treated with a dilute acid such as HCl in a concentration of between 0.1 and 3.0M. Preferrably 0.5M HCl is used at ambient temperature and pressure. This acid treatment solubilizes the rare earth carbonates, leaving the unreacted rare earth and rare earth-like oxides and/or hydroxides behind in their solid form. The resultant solution is filtered and the carbonate fraction can be further broken down into individual rare earth carbonates by techniques such as ion exchange or ...

... La2O3(49.72%), Nd2O3(20.02%), Tb4O7(5.08%), Yb2O3(5.10%) and ThO2(20.07%), a high degree of separation of La and Nd was obtained-namely, between 94.3% and 99.8%. Notably, the other rare earth or rare earth-like oxides in this mixture are among those which do not react to form carbonates with supercritical carbon dioxide or by the process of the invention.

The following example will illustrate and describe without limiting the invention. The example illustrates the carbonation process of the invention using essentially pure rare earth oxides.

EXAMPLE

Synthesis of Lanthanide Carbonates

The oxides of the following rare earths and rare earth-like materials, La2O3, CeO2, Pr6O11, Nd2O3,Sm2O3, Eu2O3, Gd2O3, Tb4O7, Dy2O3, Ho2O3, Er2O3, Yb2O3 and ZrO2, were obtained from Alfa Division, Danvers, MA, and were 99.9% pure. The carbon dioxide used in this ...

LEVEL 1 - 35 OF 68 PATENTS

4,977,937

<=2> GET 1st DRAWING SHEET OF 4

Dec. 18, 1990

Multiple angle jointer and planer knives

INVENTOR: Hessenthaler, George D., 585 W. 3900 South, #6, Murray, Utah 84123

DETDESC:

... gibe or locking bars, not shown, are tightened, the blade magnets 53 are selected to attract even minimally magnetic material, such as carbide. To provide such magnetic attraction the selected magnets should be very strong,

such as rare earth, or like magnets.

Like the jointer jig 40, a planer jig 60, shown in FIGS. 9 and 10 also utilizes magnets for maintaining blade positioning in a cylindrical cutterhead 61 ...

PAG

LEVEL 1 - 36 OF 68 PATENTS

4,962,086

<=2> GET 1st DRAWING SHEET OF 2

Oct. 9, 1990

High T c superconductor - gallate crystal structures

INVENTOR: Gallagher, William J., Ardsley, New York
Giess, Edward A., Purdys, New York
Gupta, Aranava, Valley Cottage, New York
Laibowitz, Robert B., Peekskill, New York
O'Sullivan, Eugene J., Peekskill, New York
Sandstrom, Robert L., Chappaqua, New York

ABST:
High T c oxide superconductive films can be formed on gallate layers, where the gallate layers include a rare earth element or a rare earth-like element. Combinations of rare earth elements and rare earth-like elements can also be utilized. The superconductive films can be epitaxially deposited on these gallate layers to form single crystals or, in the minimum, highly oriented superconductive layers. Any high T c superconductive ...

SUM:
... materials having Cu-O planes therein which are responsible for carrying supercurrents in these materials. Epitaxial films of these high T c superconductors can be deposited on gallate substrates, where the substrates are rare earth gallates or rare earth-like gallates. These superconductor-substrate combinations are particularly suited for analog and digital signal processing devices including matched filters, correlators, Fourier transformers, spectrum analyzers, samplers, A/D converters, etc.

...

... high T c superconductors.

The high T c superconductors used with these gallate substrates are preferably those which include Cu-O and Cu-O like current carrying planes and can include rare earth and rare earth-like elements, as well as combinations of these elements. Also included are the non-rare earth high T c superconductors such as those having Bi-Sr-Ca-Cu-O compositions and Tl-Ba-Ca-Cu- ...

... less than that when copper containing oxide superconductors are used. Lattice matching of the superconductor atomic spacing to the Ga-O plane is especially good with the copper oxide superconductors which form unique combinations with these gallates.

These rare earth and rare earth-like gallate substrates can be prepared in high quality crystal form and provide excellent lattice matches to the Cu-O based superconducting perovskites. This is important in device applications since for ...

DRWDESC:
BRIEF DESCRIPTION OF THE DRAWINGS
Pat. No. 4962086, *

FIG. 1 illustrates a high T c superconducting film epitaxially deposited on a rare earth or rare earth-like gallate substrate.

FIG. 2 illustrates a structure including a high T c superconducting strip

line surrounded by a gallate lattice-matched insulator, and further including high ...

DETDESC:

... 10 has been deposited on the crystal substrate 12. A cooling means, if needed, is not shown but is well known in the art.

Substrate 12 is a gallate substrate comprised of a rare earth or rare earth-like element, gallium, and oxygen. Examples include LaGaO3 and NdGaO3. A mixed gallate can also be used, such as one prepared from La-Y solid solutions. This technique is used to provide different lattice ...

... for use in the substrate include elements 58-71 of the periodic table, and in particular, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu. The rare earth-like elements suitable for use in the gallate substrates include Y, La, Bi and Sc. As noted, combinations of these rare earth and rare earth-like elements can also be used.

For the copper oxide superconductors the rare earth elements Tb, Dy, Ho, Er, Tm, Yb, and Lu may not provide atomic spacings that give lattice ...

... one which in preferred form is characterized by Cu-O planes that are primarily responsible for carrying the supercurrents in these materials. They generally have a perovskite-related structure and can include rare earth and/or rare earth-like elements. These materials often include alkaline earth elements, as for example Ca, Ba, Sr, Mg, . . . An example of a 92o K. superconductor is the well known YBa2Cu30 7 - x , which is the so-called " ...

... be difficult to stabilize the approximately 110o K. superconducting phase of Bi-Sr-Ca-Cu-O superconductors. However, a favorable epitaxial substrate chosen from the class of gallates including a rare earth or rare earth-like element may aid in stabilizing this and other high T c phases. A cut along the [110] orthorhombic unit cell of GdGaO3 would expose a surface with a favorable lattice match which ...

... While the unit cell of this superconducting thin film is rotated 45o with respect to the unit cell of the perovskite substrate, such rotation will not be needed for epitaxial matches of different superconductors to the rare earth and rare earth-like gallate substrates. One of skill in the art would use an orientation of the substrate such that good epitaxy and lattice matching will occur with the chosen superconducting film. In this example, the a and b axes are in the plane of the ...

... approximates a (100) cubic perovskite surface. With this as a guide, the substrate boule material is cut to provide the desired orientation.

It has been noted that the gallate substrates including a rare earth element or a rare earth-like element exhibit good hardness and tolerance to high temperatures. However, it may be preferable to process the superconducting film at temperatures less than the rhombohedral-orthorhombic transition of the substrate in order to maintain the slight orthorhombicity of the substrate.

Pat. No. 4962086, *

...

... Lett. 58, 2684 (1987).

In the practice of this invention, highly oriented films of high T c oxide superconductors have been deposited on gallate substrates. These substrates are those which include at least one rare earth element or rare earth-like element. The superconducting epitaxial films are highly oriented and can approximate single crystals.

In the further practice of this invention, these high T c oxide superconducting film-gallate substrate combinations are particularly suitable

...

... apparent to those of skill in the art that variations can be made therein without departing from the spirit and scope of the present invention. For example, the gallate substrate materials may include combinations of rare earth elements and rare earth-like elements, and may also be doped to slightly vary lattice parameters. Further, the superconductive films deposited on these substrates, while preferably being copper oxide-based superconductors, can include rare earth elements, rare earth-like elements, and alkaline earth elements. Still further, combinations of these elements may be present and, also, rare earth elements need not be present in the superconducting film.

The best epitaxial matches occur when the ...

LEVEL 1 - 37 OF 68 PATENTS

4,882,718

<=2> GET 1st DRAWING SHEET OF 3

Nov. 21, 1989

Single-head, direct overwrite magneto-optic system and method

INVENTOR: Kryder, Mark H., Pittsburgh, Pennsylvania
Shieh, Han-Ping D., Pittsburgh, Pennsylvania

DETDESC:
... domain will realign and not grow. Ferrimagnetic alloys including light rare earths such as gadolinium usually provide good mobility but generally require an approximately equal proportion of a heavy rare earth like terbium to increase coercivity to an effective operating level.

A preferred formulation (in atomic %) tested in the laboratory is as follows:

Gd13 Tb13 Fe59 Co15 having a compensation temperature of 90o ...

LEVEL 1 - 38 OF 68 PATENTS

4,882,067

<=2> GET 1st DRAWING SHEET OF 1

Nov. 21, 1989

Process for the chemical bonding of heavy metals from sludge in the silicate structure of clays and shales and the manufacture of building and construction materials therewith

INVENTOR: Johnson, Barrett, Sunnyvale, California
Rubenstein, Charles B., Los Gatos, California

DETDESC:
... containing heavy metals which are generally considered to be toxic to humans and animal life, including arsenic, cobalt, cadmium, chromium, lead, nickel, selenium, thallium, zinc, magnesium, copper, antimony, barium, molybdenum, rare earths and the like and incidental organic toxins. In general, the invented process comprises a batch or continuous operation for the processing of industrial waste and contaminated water. The process developed as described in this patent is not ...

LEVEL 1 - 39 OF 68 PATENTS

4,806,328

Feb. 21, 1989

Method of manufacturing monolithic glass members

INVENTOR: Van Lierop, Joseph G., Eindhoven, Netherlands
Bogemann, Arnoldus B. M., Eindhoven, Netherlands

Felder, Willy J. B., Vijlen, Netherlands
Huizing, Albert, Eindhoven, Netherlands

SUM:
... example, to adjust the refractive index of the glass member obtained after densification of the gel at a given value and/or to control other physical properties. Examples of such compounds are alkoxy compounds of aluminium, titanium, boron, germanium, rare earths and the like, of which the alkoxy groups each generally do not comprise more than 4 carbon atoms. Nitrates, carbonates, acetates and other compounds which decompose easily while forming oxides, may optionally also be used. Fluorine ...

LEVEL 1 - 40 OF 68 PATENTS

4,775,820

<=2> GET 1st DRAWING SHEET OF 3

Oct. 4, 1988

Multilayer electroluminescent device

INVENTOR: Eguchi, Ken, Yokohama, Japan
Kawada, Haruki, Kawasaki, Japan
Nishimura, Yukuo, Sagamihara, Japan

SUM:
... composed of a material of EL function dispersed in a binder.

As the material of EL function, there have been known heretofore inorganic metal materials such as ZnS containing Mu, Cu, ReF3 (Re: rare earths) or the like as an activating agent, and the like.

In the case of a thin film type EL device, the structure is suitable for the following purposes, that is, a thin luminescent layer can be formed so as to ...

LEVEL 1 - 41 OF 68 PATENTS

4,734,338

<=2> GET 1st DRAWING SHEET OF 3

Mar. 29, 1988

Electroluminescent device

INVENTOR: Eguchi, Ken, Yokohama, Japan
Kawada, Haruki, Kawasaki, Japan
Nishimura, Yukuo, Sagamihara, Japan

SUM:
... layer composed of a material of EL function dispersed in a binder.

As the material of EL function, there have been heretofore inorganic metal materials such as ZnS containing Mn, Cu, ReF3 and (Re: rare earths) or the like as an activating agent, and the like.

In the case of a thin film type EL device, the structure is suitable for the following purposes, that is, a thin luminescent layer can be formed so as to ...

LEVEL 1 - 42 OF 68 PATENTS

4,700,436

<=2> GET 1st DRAWING SHEET OF 4

Oct. 20, 1987

Magnetic fastener

INVENTOR: Morita, Tamao, 47-1, Arakawa 6-Chome, Arakawa-ku, Tokyo, Japan

SUM:

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to the utilization of permanent magnets made of hard magnetic powder of ferrite, alnico, rare-earth and the like materials solidified with synthetic resin and then magnetized. More particularly, it relates to an improvement is magnetic material fastener means made of permanent magnet which is provided with magnetic plates at its magnetic poles.

2. Description of the Prior Art

... PAGE

LEVEL 1 - 43 OF 68 PATENTS

4,681,625

<=2> GET 1st DRAWING SHEET OF 11

Jul. 21, 1987

Methods for simultaneously desulfurizing and degassing steels

INVENTOR: Wilson, William G., 820 Harden Dr., Pittsburgh, Pennsylvania 15229

SUM:

... difficult to get into solution and also those whose recoveries from their addition have been less than the amount added to the steel such as electrolytic manganese, ferro-niobium, ferro-tungsten and the like. The metals that may be added include aluminum, calcium, barium, rare earths and the like. The recovery of elements in the steel from additions of metals and ferro-alloys is reduced in many cases in conventional steel making technology by their contact with slags high in oxides such as iron ...

... [*21] metals to be added in the tube to enhance desulfurization are those which are known to have the ability to reduce the oxygen content of the steel, but also have the ability to form sulfides which would float out of the steel into the slag which include magnesium, calcium, barium, rare earths and the like.

[*22] 22. The method as claimed in claims 1 or 5 wherein the ferro-alloys and elemental metals to be added in the tube are those necessary to obtain the desired chemical analysis of the finished steel such as ferro- ...

LEVEL 1 - 44 OF 68 PATENTS

4,598,914

<=2> GET 1st DRAWING SHEET OF 10

Jul. 8, 1986

Sealing and bearing means by use of ferrofluid

INVENTOR: Furumura, Kyozaburo, Ninomiya, Japan
Sugi, Hiromi, Fujisawa, Japan
Murakami, Yasuo, Fujisawa, Japan
Asai, Hiromitsu, Fujisawa, Japan

DETDESC:

... polyamide resin, fluorine resin, polyethersulfone resin, polyphenylene

sulfide resin or the like. The magnetic material to be mixed with the aforesaid synthetic resin material is made of barium ferrite powder, strontium ferrite powder, rare earths or the like.

The mixture ratio of the synthetic resin and the aforesaid normal magnetic substance is different in case the magnet is used for bearing purposes and sealing purposes.

In case the magnet is employed as bearing, it is to have enough ...

LEVEL 1 - 45 OF 68 PATENTS

4,582,688

<=2> GET 1st DRAWING SHEET OF 1

Apr. 15, 1986

Process for recovery of mineral values

INVENTOR: Venkatesan, Valadi N., Arlington, Texas

DETDESC:

... present, molybdenum can be selectively leached from the ore utilizing a leaching solution containing sodium bicarbonate and oxygen. Thus, for example, substances such as vanadium, molybdenum, selenium, nickel, copper, uranium, the rare earths and the like may be recovered using the process of the present invention. The main criteria is that at least one of the minerals found in the ore may be solubilized without the solubilization of at least one other mineral.

Thus, the present ...

... part of the uranium is present as a refractory uranium-mineral complex. For example, other minerals found in the form of a uranium-mineral complex, include copper, nickel, thorium, scandium, the rare earths, and the like.

Uranium minerals frequently occur in the highly siliceous rocks and sedimentary deposits, generally as a mixture of the insoluble tetravalent form and the soluble hexavalent form. Uranium is also found in association with the silicates, ...

LEVEL 1 - 46 OF 68 PATENTS

4,570,692

<=2> GET 1st DRAWING SHEET OF 6

Feb. 18, 1986

Methods of pouring metal

INVENTOR: Wilson, William G., 820 Harden Dr., Pittsburgh, Pennsylvania 15229

DETDESC:

... teeming operation and good distribution throughout the entire ingot can be expected. When the stability of the oxides in the slags is high, even the most reactive alloys such as aluminum, titanium, zirconium, magnesum, calcium or rare earths and the like will be transferred to the steel from the slag with maximum retention of the alloying element in the metal being teemed. The addition of these alloys along with these stable oxides that will not react with these alloying elements, the elimination of the flow ...

LEVEL 1 - 47 OF 68 PATENTS

4,491,563

Jan. 1, 1985

Process for deodorizing a paraffinic hydrocarbon feedstock

INVENTOR: Reusser, Robert E., Bartlesville, Oklahoma
Murtha, Timothy P., Bartlesville, Oklahoma
Todd, Elizabeth A., Bartlesville, Oklahoma

DETDESC:
... examples are given to provide a better and more complete disclosure of this invention but should not be interpreted to limit its scope.
EXAMPLE I

This example describes a typical catalyst preparation whereby NiO and a rare earth like CeO is deposited on a support. This general procedure is also described in U.S. Pat. No. 4,217,248 column 7, line 49 to column 8, line 41. Two hundred grams of 13 x ...

LEVEL 1 - 48 OF 68 PATENTS

4,489,042

Dec. 18, 1984

Process for recovery of mineral values from subterranean formations

INVENTOR: Savins, Joseph G., Dallas, Texas
Johnson, Warren F., Dallas, Texas

DETDESC:
... formations. However, it should be clear that the invention is applicable to the solution leaching of other mineral values capable of forming soluble reaction products with leaching solutions. Thus, for example, substances such as vanadium, molybdenum, nickel, copper, the rare earths and the like are recovered using the process of the present invention.

As an illustration, the leach chemistry of a uranium ore body can be described by the following equations using hydrogen peroxide (H2O2) as oxidant:

PAGE

...

LEVEL 1 - 49 OF 68 PATENTS

4,486,026

<=2> GET 1st DRAWING SHEET OF 10

Dec. 4, 1984

Sealing and bearing means by use of ferrofluid

INVENTOR: Furumura, Kyozaburo, Ninomiya, Japan
Sugi, Hiromi, Fujisawa, Japan
Murakami, Yasuo, Fujisawa, Japan
Asai, Hiromitsu, Fujisawa, Japan

DETDESC:
... polyamide resin, fluorine resin, polyethersulfone resin, polyphenylene sulfide resin or the like. The magnetic material to be mixed with the aforesaid synthetic resin material is made of barium ferrite powder, strontium ferrite powder, rare earths or the like.

The mixture ratio of the synthetic resin and the aforesaid normal magnetic substance is different in case the magnet is used for bearing purposes and sealing purposes.

In case the magnet is employed as bearing, it is to have enough ...

PAGE 54

LEVEL 1 - 50 OF 68 PATENTS

4,481,437

<=2> GET 1st DRAWING SHEET OF 3

Nov. 6, 1984

Variable flux permanent magnets electromagnetic machine

INVENTOR: Parker, Rollin J., Greenville, Michigan

DETDESC:
... cylindrical housing 12 in which is mounted, by any appropriate convenient means, a cylindrical tubular stator 14 comprising high strength permanent magnets such as ceramic, or ceramic rare earth, cobalt-rare earth, or the like [magents] magnets. Each one of a pair of end cap members 16 and 18 fastened at an end of the housing 12 by bolts or screws 20 supports respectively an end magnet ring 22 an ...

LEVEL 1 - 51 OF 68 PATENTS

4,455,392

Jun. 19, 1984

Process for preparing a supported silver catalyst

INVENTOR: Warner, Glenn H., St. Albans, West Virginia
Bhasin, Madan M., Charleston, West Virginia
Lieberman, Bernard, Kew Gardens, New York

SUM:
... as lithium, sodium, potassium, rubidium and/or cesium; one or more alkaline earth metals, such as, barium, magnesium and strontium; or one or more of the other known promoters, such as thallium, gold, tin, antimony and rare earths; and the like. For purposes of convenience, the catalyst preparation process of the invention is described below in terms of a silver-first method of preparation wherein the promoter is selected from among alkali metals, it being recognized that other promoters of ...

LEVEL 1 - 52 OF 68 PATENTS

4,438,077

Mar. 20, 1984

Two stage selective oxidative leach method to separately recover uranium and refractory uranium-mineral complexes

INVENTOR: Tsui, Tien-Fung, Richardson, Texas

SUM:
... least part of the uranium is present as a refractory uranium-mineral complex. For example, other minerals found in a uranium-mineral complex include copper, nickel, thorium, scandium, the rare earths, and the like.

Uranium minerals frequently occur in the highly siliceous rocks and sedimentary deposits, generally as a mixture of the insoluble tetravalent form and the soluble hexavalent form. Uranium is also found in association with the silicates, ...

LEVEL 1 - 53 OF 68 PATENTS

4,427,236

Jan. 24, 1984

In-situ uranium leaching

INVENTOR: Dotson, Billy J., Grand Prairie, Texas

DETDESC:

... be clear that the invention is applicable to the solution mining of other mineral values capable of forming soluble reaction products with carbonated leaching solutions. Thus, for example, substances such as vanadium, molybdenum, nickel, copper, the rare earths and the like are recovered using the process of the present invention.

Uranium minerals frequently occur in the highly siliceous rocks and sedimentary deposits, generally as a mixture of the insoluble quadrivalent form and the soluble sexivalent form. ...

LEVEL 1 - 54 OF 68 PATENTS

4,419,276

Dec. 6, 1983

Silver catalyst for the manufacture of ethylene oxide and a process for preparing the catalyst

INVENTOR: Bhasin, Madan M., Charleston, West Virginia
Warner, Glenn H., St. Albans, West Virginia

SUM:
... as lithium, sodium, potassium, rubidium and/or cesium; one or more alkaline earth metals, such as, barium, magnesium and strontium; or one or more of the other known promoters, such as thallium, gold, tin, antimony and rare earths; and the like. For purposes of convenience, the catalyst preparation process of the invention is described below in terms of a silver-first method of preparation wherein the promoter is selected from among alkali metals, it being recognized that other promoters of ...

PAGE 59

LEVEL 1 - 55 OF 68 PATENTS

4,405,380

Sep. 20, 1983

High strength, low alloy steel with improved surface and mechanical properties

INVENTOR: Griffith, Cecil B., North Royalton, Ohio
Thomas, Jerry D., North Olmsted, Ohio
Demianczuk, Dionisyj W., Parma, Ohio
Abraham, John K., Broadview Heights, Ohio
Franklin, Joseph E., Medina, Ohio

DETDESC:
... present invention is directed to a steel with carbon in the range of 0.03 to 0.06%, the last being an upper limit which also appears crucial for attainment of so-called auto-sulfide-shape control and thus avoidance of the use of rare earths or the like with their consequent expense and tendency to produce unwanted non-metallic surface inclusions.

The base metal may thus consist of the defined composition, with manganese in the range of 0.2 to 0.6%, very preferably not more than 0.45%, while the ...

PAGE 60

LEVEL 1 - 56 OF 68 PATENTS

4,376,264

<=2> GET 1st DRAWING SHEET OF 6

Mar. 8, 1983

Method of checking the authenticity of papers and physically identifiable paper for use in said method

INVENTOR: Dokter, Hendrik D., Ugchelen, Netherlands
Hildering, Roelof, Frederikslaan, Netherlands
Mackor, Adrianus, Hollandsche Rading, Netherlands

SUM:
... be some which show a suitable ESR spectrum, although to the knowledge of the present inventors this has never been investigated. However, a further requirement is that a useful ESR spectrum should be obtained at room temperature. Many compounds of rare earths and the like show a useful ESR spectrum only at low temperatures, such as the temperature of liquid nitrogen, but of course an identification of banknotes and the like is hardly of any practical value, if it cannot be carried out at normal room ...

LEVEL 1 - 57 OF 68 PATENTS

4,367,163

<=2> GET 1st DRAWING SHEET OF 1

Jan. 4, 1983

Silica-clay complexes

INVENTOR: Pinnavaia, Thomas J., East Lansing, Michigan
Mortland, Max M., East Lansing, Michigan
Endo, Tadashi, East Lansing, Michigan

DETDESC:
... be used as a catalyst support for various catalytically active metals such as a Group VIII metal such as platinum, palladium, nickel, iron or cobalt; molybdenum; tungsten; a rare-earth and the like. Moreover, the intercalated product can be used in admixture with other common adsorbents or matrix materials such as silica, alumina, silica-alumina hydrogel and the like. The catalysts which can be prepared by ...

LEVEL 1 - 58 OF 68 PATENTS

4,358,158

<=2> GET 1st DRAWING SHEET OF 1

Nov. 9, 1982

Solution mining process

INVENTOR: Showalter, William E., Seal Beach, California

DETDESC:
... invention is applicable to the solution mining of other mineral values capable of forming soluble reaction products with the dilute carbonic acid leaching solution. Thus, for example, substances such as vandium, molybdenum, nickel, copper, the rare earths and the like can be recovered using the process of the present invention.

Uranium minerals frequently occur in the highly siliceous rocks and sedimentary deposits, generally as a mixture of the insoluble quadrivalent form and the soluble ...

LEVEL 1 - 59 OF 68 PATENTS

4,358,157

<=2> GET 1st DRAWING SHEET OF 1

Nov. 9, 1982

Solution mining process

INVENTOR: Showalter, William E., Seal Beach, California

DETDESC:
... invention is applicable to the solution mining of other mineral values capable of forming soluble reaction products with the dilute carbonic acid leaching solution. Thus, for example, substances such as vanadium, molybdenum, nickel, copper, the rare earths and the like can be recovered using the process of the present invention.

Uranium minerals frequently occur in the highly siliceous rocks and sedimentary deposits, generally as a mixture of the insoluble quadrivalent form and the soluble ...

LEVEL 1 - 60 OF 68 PATENTS

4,328,079

<=2> GET 1st DRAWING SHEET OF 1

May 4, 1982

Method for pumping impurities, especially noble gases, from hydrogen or mixtures of hydrogen and its isotopes

INVENTOR: Hemmerich, Johann, Stetternich, Federal Republic of Germany

DETDESC:
... 2 is adjusted by the fluid within the chamber 13 to the temperature for the desired hydrogen partial pressure. In this variation, the cathodes are formed from hydride-forming metals and alloys, for example, rare earth and rare earth-like metals and binary and ternary alloys of them with the addition of transition metals like iron, nickel, cobalt, etc. Upon formation of the sputtered film 12, hydrogen and its isotopes form hydrides with the film by chemisorption that can ...

LEVEL 1 - 61 OF 68 PATENTS

4,279,668

<=2> GET 1st DRAWING SHEET OF 7

Jul. 21, 1981

Directionally solidified ductile magnetic alloy

INVENTOR: Kurz, Wilfried, Lausanne, California, Switzerland
Glardon, Remi, Berkeley, California

SUM:
... relates to a process for the fabrication of magnetic alloys for permanent magnets and to the magnetic bodies obtained by this process.

More particularly the invention relates to ternary magnetic alloys consisting of rare-earth or rare-earth-like elements, cobalt and at least one metal selected from the group which consists of iron, nickel, aluminum, copper, molybdenum or manganese. Preferably the latter metal phase includes 0.1 to 10% (atomic) of the total alloy as ...

LEVEL 1 - 62 OF 68 PATENTS

4,208,225

<=2> GET 1st DRAWING SHEET OF 6

Jun. 17, 1980

Directionally solidified ductile magnetic alloys magnetically hardened by precipitation hardening

INVENTOR: Kurz, Wilfried, Lausanne, Switzerland
Glardon, Remi, Corseaux, Switzerland

SUM:
... relates to a process for the fabrication of magnetic alloys for permanent magnets and to the magnetic bodies obtained by this process.

More particularly the invention relates to ternary magnetic alloys consisting of rare-earth or rare earth-like elements, cobalt and at least one metal selected from the group which consists of iron, nickel, aluminum, copper, molybdenum or manganese.
BACKGROUND OF THE INVENTION

Ferromagnetic alloys of the cobalt/rare-earth type have a high energy ...

LEVEL 1 - 63 OF 68 PATENTS

4,105,253

<=2> GET 1st DRAWING SHEET OF 1

Aug. 8, 1978

Process for recovery of mineral values from underground formations

INVENTOR: Showalter, William E., Seal Beach, California

DETDESC:
... be clear that the invention is applicable to the solution mining of other mineral values capable of forming soluble reaction products with carbonated leaching solutions. Thus, for example, substances such as vanadium, molybdenum, nickel, copper, the rare earths and the like are recovered using the process of the present invention.

Uranium minerals frequently occur in the highly siliceous rocks and sedimentary deposits, generally as a mixture of the insoluble quadrivalent form and the soluble sexivalent form. ...

LEVEL 1 - 64 OF 68 PATENTS

4,050,052

<=2> GET 1st DRAWING SHEET OF 1

Sep. 20, 1977

Electrical temperature measuring resistor structure, particularly for resistance thermometers

INVENTOR: Reichelt, Walter, Hanau, Germany, Federal Republic of
Sauer, Gunter, Maintal, Germany, Federal Republic of

DETDESC:
... temperatures can be applied. This cover layer, shown in FIG. 2 schematically at 3, may consist for example of an epoxy resin, glass, or metal oxides of the group of aluminum, beryllium, thorium, rare earths, or the like. The cover layer 3 may be applied by vapor deposition, dusting, or spraying; its primary characteristics should be to be resistant against thermal and mechanical effects. The cover layer should additionally, preferably, provide ...

LEVEL 1 - 65 OF 68 PATENTS

4,014,706

Mar. 29, 1977

Solid solution ceramic materials

INVENTOR: Waldron, Robert D., Scottsdale, Arizona

SUM:
... dimensions of said structure and all physical and chemical properties of the solution are continuous functions of composition. The lattice symmetry may change within said composition range by uniform distortion of the structure as the composition changes.

Rare earth-like (metallic) elements as used herein means elements of atomic numbers 21, 39, and/or 57-71.

Yttrium earth (metallic) elements as used herein means elements of atomic numbers 39 and/or 64-71.

... PAGE

LEVEL 1 - 66 OF 68 PATENTS

3,983,077

<=2> GET 1st DRAWING SHEET OF 2

Sep. 28, 1976

Process for making ceramic resistor materials

INVENTOR: Fuller, Peter G., Lakeville, Massachusetts
Stoeckler, Hans A., Woonsocket, Rhode Island

DETDESC:
... invention also typically include additions of silicon oxide or manganese oxide or the like and other dopants typically incorporated in such ceramic compositions include lanthanum, cerium, dysprosium, and praesodymium as well as other rare earths and the like commonly used in ceramic resistor materials of positive temperature coefficient of resistivity. Typically, the ceramic titanate materials produced by the process are provided with stoichiometric or slightly titanium-rich compositions, the compositions preferably having an ...

LEVEL 1 - 67 OF 68 PATENTS

3,896,616

<=2> GET 1st DRAWING SHEET OF 1

Jul. 29, 1975

Process and apparatus

INVENTOR: Keith, Carl D., Summit, New Jersey
Mooney, John J., Wyckoff, New Jersey

DETDESC:
... 0.1 to 1.5%. The catalytic element may contain, with or without the platinum group metals, one or more catalytic materials which may include, for example, chromium, manganese, vanadium, copper, iron, cobalt, nickel, rare earths, and the like.

The relative sizes of the initial and subsequent catalytic elements may be such that their volume ratio, i.e. the superficial volume of the subsequent catalyst to the initial catalyst, including void spaces within the catalytic masses, is often at least about ...

LEVEL 1 - 68 OF 68 PATENTS

3,791,143

<=2> GET 1st DRAWING SHEET OF 1

Feb. 12, 1974

PROCESS AND APPARATUS

INVENTOR: Keith, Carl D., Summit, New Jersey
Mooney, John J., Wyckoff, New Jersey

DETDESC:
... 1.5 percent. The catalytic element may contain, with or without the platinum group metals, one or more catalytic materials which may include, for example, chromium, manganese, vanadium, copper, iron, cobalt, nickel, rare earths, and the like.

The relative sizes of the initial and subsequent catalytic elements may be such that their volume ratio, i.e., the superficial volume of the subsequent catalyst to the initial catlyst, including void spaces within the catalytic masses, is often at least about ...